REMARKS

Applicant acknowledges the First Action of 17 NOV. 2005 and requests reconsideration of the application, as amended.

Applicant notes, with appreciation, the allowance of independent claim 1 and its dependent claims 2-8.

Applicant appreciates the suggestion, at the bottom of page 3 of the Action, to amend independent claim 9 to refer to the barbs being "bent upward." However, since motors can be installed upside down, sideways, or in some other orientation, using the term "upward" could be misinterpreted, as indicating infringement only when the motor or fan is installed with the barbs pointing upward. The claim should cover the structure, regardless of which orientation is chosen for fan mounting.

Accordingly, claim 9 has been amended to define the "bent" state of tabs 34 in a way which is not unduly limiting. As described on specification page 5, bottom half, when stator 22 is pressed onto bearing support tube 38, tabs 34 go from their "flat" orientation (FIG. 5) to their "bent" mounted orientation (FIG. 7), in which they point "radially inward" and are angled "away from said bearing arrangement" (see FIG. 6, with ball bearings at one end of tube 38 and the tabs 34 pointing toward the opposite end of tube 38. This defines the structure without reference to how the motor as a whole is mounted, and distinguishes over the references cited.

A brief review of some significant features of the present invention may facilitate understanding of its

differences from the prior art. As stated at specification page 5, lines 10-16, motors of this kind typically rely upon a rotor position sensor, which is secured to a bearing support tube (38) and must have a **predefined angular orientation** with respect to the stator (22). Thus, it is necessary to fix the angular orientation between support tube (38) and stator (22). Historically, this was done by providing a groove in the stator lamination stack, but this poses manufacturing and assembly issues. Secondly, in motors like this, one must keep the stator and the bearing support tube from **axially separating**, even when subjected to acceleration forces, which in automotive installations can often exceed 4 gravities!

The present invention avoids the need to groove the stator lamination stack, and performs **both** the anti-rotation function and the anti-axial-separation function, using the **same elements**, namely projecting portions 34' (FIG. 7) cooperating with grooves on the outside (98) of the tube (38).

CLAIM REJECTION--SECTION 103

Claim 9 was rejected under section 103, as allegedly obvious over a combination of WROBEL/PAPST USP 5,170,086 with HARADA/NIPPON DENSAN USP 5,363,003.

According to WROBEL, it is necessary to provide an axial groove 31 on the stator (col. 4, lines 35-40, and FIG. 2) into which, after assembly, the axial cam 35 on tube 7 engages. This requires that, during assembly of the stator lamination stack 9, the individual laminations or plates be perfectly aligned with each other, so that groove 31 is continuously

open along its extent, and is not interrupted or obstructed by incorrect rotational alignment of even a single lamination. Achieving such **perfect** alignment is a difficult task, especially when the motor and its parts are small or miniature.

According to HARADA, as shown in FIG. 1, it is similarly necessary to provide, on the inner surface of the stator lamination stack, a groove 27, into which a projection 25, on the outer surface of the bearing support tube 25, engages; see col. 3, lines 50-61. This has the **same disadvantage** as in WROBEL, namely that one must assemble the stator lamination stack *perfectly*; see col. 4, lines 21-25.

Page 3 of the Office Action suggested that HARADA's structure has a stop, against which the stator can abut, and thus has *some similarity* to the present invention. However, HARADA fails to teach or suggest elements like the tabs 34 of the present invention, which simultaneously define a precise angular or *rotational* orientation of the stator-tube combination and prevent *axial* separation of the stator from the tube. In short, neither WROBEL nor HARADA teaches how to avoid the need to put a groove in each of the stator laminations, nor does either of them teach how to provide **both** anti-rotation and anti-axial-separation functionality by the **same** elements. The present invention is thus a cost-saving innovation, which was not taught or suggested by the prior art.

A preferred way to produce the claimed structure is, as described in the specification, to dimension tabs 34, of annular disk 20, so that they extend radially inward to terminate at a radius r1 from central axis 101 (see enclosed sketch) which is smaller than a radius r2 of a corner of bearing support tube 38. Thus, when tube 38 is slid up into recess 36 of stator 22, it bends tabs 34 diagonally upward to form barbs 34' as shown in FIG. 7, and recited in amended claim 2. These diagonal barbs 34' thus dig into the coating on the outside surface 98 of bearing support tube 38, and thereby resist any forces tending to axially separate tube 38 from stator 22. Since these same tabs or barbs also engage in grooves on bearing tube 38, they also provide the anti-rotation function.

In view of the foregoing amendment and arguments, it should be apparent that claim 9, as amended, patentably distinguishes over any combination of WROBEL, HARADA and the other art of record. Passage of the application to allowance is solicited.

If the examiner notes any remaining informalities, a telephone call to Applicant's counsel is invited. No extension fee is believed necessary in connection with this amendment but if any is required, please notify the undersigned, and charge to Deposit Account 23-0442.

Respectfully submitted,

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